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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,227	11/03/2003	Steven R. Kleiman	112056-0143	3081
24267	7590	07/21/2006	EXAMINER	
CESARI AND MCKENNA, LLP			PEERS, CHASE W	
88 BLACK FALCON AVENUE			ART UNIT	
BOSTON, MA 02210			PAPER NUMBER	
			2186	

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/700,227

**Applicant(s)**

KLEIMAN ET AL.

**Examiner**

Chase Peers

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **1. ACKNOWLEDGMENT OF ISSUES RAISED BY THE APPLICANT**

#### **Response to Amendment**

Applicant's arguments filed 6/02/2006 have been fully considered but they are not deemed to be persuasive and, as required by **M.P.E.P. § 707.07(f)**, a response to these arguments appears below.

### **2. REJECTIONS BASED ON PRIOR ART**

#### ***Claim Rejections - 35 USC § 102***

Claims 36, 39, 42, and 44 rejected under 35 U.S.C. 102(e) as being clearly anticipated by Spiegel et al. (Pat No 6571326).

Spiegel et al. teaches determining which blocks are unallocated in a strip across the disks; reserving unallocated blocks for storing the redundant information in one or more reserved unallocated blocks; arranging data in the stripe for the data to be stored in one or more allocated blocks across the disks of the array; assigning the redundant information to the one or more reserved unallocated blocks; and writing the data in the allocated blocks and the redundant information in the one or more reserved unallocated blocks as the stripe across the disks of the array (column 4 line 44 to column 6 line 20).

#### ***Claim Rejections - 35 USC § 103***

Claim 16, 17, 21, 34 and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson, Baylor et al., and Stallmo et al. as applied to claims

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1, 14, 15, and 18-20 above, and further in view of Wiencko et al. (Pat No 6557123).

Patterson, Baylor et al., and Stallmo et al. describe all the limitations of claims 1, 14, 15, and 18-20. Patterson teaches the redundant information being parity. Patterson Baylor et al., and Stallmo et al. do not expressly disclose that the redundant storage algorithm is a symmetric or asymmetric algorithm.

Wiencko et al. does disclose redundant information being parity. Patterson Baylor et al., and Stallmo et al. do not expressly disclose that the redundant storage algorithm is a symmetric or asymmetric algorithm (column 9 line 57 to column 10 line 2).

Patterson, Baylor et al., Stallmo et al., and Wiencko et al. are analogous art because they are from a similar problem solving area, storage arrays and redundancy. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a symmetric algorithm for the redundant storage. The suggestion for doing so would have been for reversibility. Therefore, it would have been obvious to combine Wiencko et al., Baylor et al., Stallmo et al., and Patterson for the benefit of reversibility to obtain the invention as specified in claims 16, 17, 21, 34 and 35.

Claims 37, 38, 40, 41, and 43 rejected under 35 U.S.C. 103(a) as being unpatentable over Spiegel et al. as applied to claims 36, 39, 42, and 44 above, and further in view of Patterson.

Spiegel et al. describes storing a second stripe across the array by

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determining one or more unallocated blocks across the array (column 4 line 44 to column 6 line 20).

Spiegel et al. does not describe storing parity information as redundant information in a reserved unallocated block, adding another disk to the array, writing the data to the allocated blocks and the redundant information to the unallocated blocks of the second stripe. Patterson describes all this functionality.

Spiegel et al. and Patterson are analogous art because they are from the same field of endeavor, data allocation in a multi drive system. At the time of the invention it would have been obvious to a person of ordinary skill in the art to allow for more drives and multiple stripes. The suggestion for doing so would have been speed increases. Therefore, it would have been obvious to combine Patterson and Spiegel et al. for the benefit of speed to obtain the invention as specified in claims 37, 38, 40, 41, and 43.

### **3. ARGUMENTS CONCERNING PRIOR ART REJECTIONS**

#### **1<sup>st</sup> POINT OF ARGUMENT:**

Regarding the statement that Patterson does not anticipate claims 1-5, 22, 23, and 31-33 of the instant application, the examiner disagrees. The applicant has mentioned that adding disks is hard because of data being spread evenly over the disks. The examiner still finds Patterson to read upon the claims because it is still possible to add a disk and change the parity location. Amending the offending claims could possibly lead to traversal of Patterson.

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#### **4. CLOSING COMMENTS**

##### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

#### **5. STATUS OF CLAIMS IN THE APPLICATION**

The following is a summary of the treatment and status of all claims in the application as recommended by **M.P.E.P. § 707.07(i)**:

##### **a(1) SUBJECT MATTER CONSIDERED ALLOWABLE**

No subject matter was considered allowable in this action.

##### **a(2) CLAIMS NO LONGER IN THE APPLICATION**

Claim 13 was cancelled by the amendment dated 6/02/2006.

**a(3) CLAIMS REJECTED IN THE APPLICATION**


Per the instant office action, claims 1-12 and 14-44 have received a second action on the merits and is subject of a final action.

For at least the above reasons it is the examiner's position that the applicant's claims are not in condition for allowance.

**6. DIRECTION OF ALL FUTURE REMARKS**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chase Peers whose telephone number is (571) 272-6757. The examiner can normally be reached on from Monday to Friday, 8AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

  
MATTHEW KIM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100